

ABSTRACT OF THE DISCLOSURE

A synchronous data mirroring technique includes a log forwarding process and a consistency point (CP) process. During log forwarding, a source storage server receives write requests from clients, creates a log entry for each request in nonvolatile memory, and transmits each log entry to a destination storage server at a mirror site. The destination storage server writes each log entry to a file. If a primary volume becomes inaccessible due to a failure, the file is used to produce an updated mirror volume. The CP process includes updating a primary volume based on the write requests, and updating the mirror volume to reflect the updated primary volume. The mirror volume is updated by transmitting CP data from the source storage server to the destination storage server, and using the CP data to update the mirror volume through a network administration layer and a storage layer in the destination storage server.